

Order Adopting Rules

Minnesota Department of Health

Division of Environmental Health

Adoption of Rules Relating to Submerged Closed Loop Heat Exchangers, Minnesota Rules, Chapter 4725; Revisor's ID Number 4953, CAH Docket Number 25-9000-41378

BACKGROUND INFORMATION

1. The Department of Health (MDH) has complied with all notice and procedural requirements in Minnesota Statutes, Chapter 14, Minnesota Rules, Chapter 1400, and other applicable law, including Minnesota Statutes, Section 103I.208, Subdivision 3.

2. MDH received no written comments and submissions on the rules. No persons requested a public hearing, which means that there were no persons that subsequently withdrew their requests. Therefore, there are not 50 or more requests for a public hearing. MDH received no requests for notice of submission to the Court of Administrative Hearings.

3. Minnesota Rules, Part 4725.0100, Subpart 41, Item G, is amended to remove the restriction on where a screen is located during well or boring construction. The Legislature directed MDH to consider rules for screen configurations during this expedited process. Minn. Stat. § 103I.209, Subd. 2(b). Since adopting the original Submerged Closed Loop Heat Exchanger (SCLHE) rules, MDH learned, including through Advisory Committee discussions, that the requirement for screens to be placed only at the bottom of a casing is duplicative with rule requirements prohibiting the interconnection of aquifers and, for wells used in a SCLHE system, gives rise to the need for burdensome variance applications, which require system owners and MDH to incur additional costs and spent time. Removing this requirement is reasonable and most efficiently and consistently allows for multiple screen constructions for water-supply wells that can be safely and effectively used in SCLHE systems.

4. The amendment to Minnesota Rules, Part 4725.0100, Subpart 47, Item F, is needed to clarify that a SCLHE system includes the lateral piping that connects SCLHE to the buildings they serve. The SCLHE system permit application requires information on all components of a system. SCLHE lateral piping is part of the components of the system. The inclusion of this requirement in the rule clarifies the requirement.

5. The addition of Minnesota Rules, part 4725.0110, Subpart 48, Item C, creates clarity on who is a third-party testing agency. This definition establishes a mechanism for reviewing and

accepting alternative materials, joints, fittings, and connections for SCLHE systems, as provided under proposed Part 4725.7075, Subpart 3, discussed below. This is consistent with Minnesota Statutes, Section 103I.208, Subdivision 3, which mandates MDH “adopt rules to implement requirements for the permitting and installation of submerged closed loop heat exchangers[.]”

6. The amendment to Minnesota Rules, Part 4725.1834, Subpart 1, Item B, clarifies when Minnesota unique well numbers need to be provided for wells used in a SCLHE system. This revision adds clarity for permit applicants on the existing SCLHE system permitting process. A SCLHE system permit may be issued before well construction or selection of a contractor, and the system owner must provide Minnesota unique well numbers to MDH so they can be added to the permit.

7. Minnesota Rules, Part 4725.1834, Subpart 2, Item B, is amended as follows:

- a. (6)(b)(ii): The revision incorporates the proposed revision to Part 4725.7075, Subpart 3, that provides an opportunity for alternative materials, joints, fittings, and connections to be used in SCLHE systems. The revision is needed to effectuate the incorporated revisions to that subpart.
- b. The addition of “and” in Subitems 9 and 10 corrects a typographical error in the current rule.

8. The revision to Minnesota Rules, Part 4725.1834, Subpart 5, Item B, Subitem 1, incorporates the same proposed revision to Part 4725.7075, Subpart 3, as described above regarding Subpart 2, Item B (6)(b)(ii), and for the same reason as provided above.

9. The amendment to Minnesota Rules, Part 4725.1834, Subpart 6, Item A, Subitem 11, allows MDH to verify that wells used in a SCLHE system are constructed in compliance with Minnesota Statutes, Chapter 103I, and Minnesota Rules, Chapter 4725, with respect to distances from regulated structures, utilities, water bodies, other wells, and contaminated sources. The rule already requires submission of a diagram with this same information when SCLHE systems are proposed. This proposed revision allows MDH to verify that these approved plans were followed in compliance with legal requirements.

10. The amendment to Minnesota Rules, Part 4725.1834, Subpart 7, Item H, requires the system owner to provide information that allows MDH to determine a pattern in product or component failure when considering future continued approval of an alternative material, joint, fitting, or connection through permit issuance or modification. Identifying a pattern of failure, resulting in pressure loss or leakage, ensures the protection of public health by not approving use of these failed products or components in future systems.

11. Minnesota Rules, Part 4725.2750, is amended as follows:

- a. The language of the Part is proposed to be broken out into items for ease of reading, with additional language proposed to be added via Item E. The language adds clarity that multiple screens in a well used in a SCLHE system may be separated by a screen sump.
- b. The proposed addition of Item E exempts wells used in SCLHE systems from the requirement prohibiting well construction with multiple screens and from the limit on screen sump length. MDH considered the need to use multiple screens separated by a screen sump in SCLHE systems to maximize geothermal efficiency. A screen sump that is more than 10 feet in length is often required to construct an efficient SCLHE system because of the geology encountered at the site. Wells used in a SCLHE system must go through a permit application review process. This ensures the protection of public health through the review of the geology and construction of wells used in a system.
- c. The proposed addition of Item F requires third-party geologic logging for wells constructed in unconsolidated materials, which are more variable in lithology than bedrock materials, provides an independent analysis of the geologic material of the bore hole to ensure the protection of public health by not interconnecting aquifers.

12. Minnesota Rules, Part 4725.3050, is amended to create an exemption for grouting materials required for the space surrounding a screen sump between multiple screens in wells used in SCLHE systems. The exemption ensures accuracy in placement of higher-solid grouting material around the screen sump, separating the screens. By the nature of how wells are constructed for use in SCLHE systems, effective use of the system requires accurate placement of grout. Requiring lower-solid grout material has potential to migrate beyond the indented depth of placement, effectively decreasing the efficiency of the screens to move water in or out of the well. This change is necessary to ensure the placement of grout separating the screens does not plug up screens and potentially decrease efficiency of a system.

13. Minnesota Rules, Part 4725.7075, Subpart 3, is amended to provide an alternative to the existing International Mechanical Code (IMC) standards and requirements for SCLHE systems. The standards and requirements included in the IMC address establish technology and safe mechanical practices. The amended language addresses the innovative nature of emerging geothermal technologies, such as SCLHE systems, in a manner the balances innovation with the need to protect public health. SCLHE systems require innovation and proprietary materials, joints, fittings, or connections to create safe, efficient, and affordable systems. Because of this

reality, MDH has found that SCHLE installations have consistently required variances from the existing requirements of Subpart 3. The rule needs to allow alternatives to this rule without resorting to the variance process, which is not efficient when required for every SCHLE installation.

Requiring equivalency to IMC standards and requirements ensures protection of public health by minimizing the potential for leaks and failure. A third-party testing agency allows for unbiased testing of alternative materials, joints, fittings, or connections for use in SCHLE systems. A professional engineer's assessment of the alternative material, joint, fitting, or connection, including the third-party testing results, ensures alternatives are adequately and ethically assessed and recommended by an individual licensed by the state of Minnesota.

14. The amendment to Minnesota Rules, Part 4725.7075, Subpart 4, Item F, Subitem 2, allows a well contractor to witness a pressure test. The change is needed to create efficiency during pressure testing if a third-party well contractor is available to witness the test.

15. Minnesota Rules, Part 4725.7075, Subpart 4, Item I, Subitem 5, clarifies the measuring point for the hydrostatic pressure. The clarification is needed to ensure pressure measurements are reported consistently.

16. The rules are needed and reasonable.

ORDER

The above-named rules, in the form published in the State Register on December 22, 2025, with the modifications as indicated in the Revisor's draft, file number AR4953, dated 03/18/26, are adopted under my authority in Minnesota Statutes, Section 103I.208, Subdivision 3.

8/6/2026

Date

/s/ Wendy Underwood

Wendy Underwood

Deputy Commissioner